

Creating an IPv6 interface using SLAAC

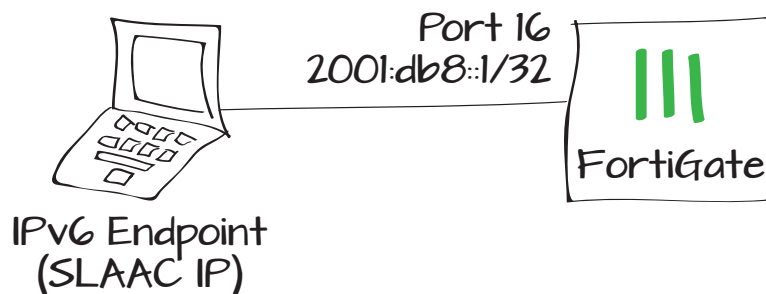
In this recipe you will learn how to configure an interface on your FortiGate to assign IPv6 addresses. Using Stateless Address Autoconfiguration (SLAAC), the IPv6 interface will automatically assign IPv6 addresses to any device that connects to that port.

This recipe assumes that your Internet connection is enabled for IPv6.



The IPv6 address block used in this recipe is reserved for documentation purposes and will not work in your environment. If you're not sure how to determine the correct IPv6 address for your environment, refer to the [FortiOS IPv6 Handbook Chapter](#).

1. Configuring the IPv6 network interface
2. Configuring the IPv6 firewall address
3. 'Bouncing' the IPv6 interface
4. Results



Configuring the IPv6 network interface

Navigate to **System > Network > Interfaces** and choose (or create) an interface appropriate for your network.

In the example, we are using port16 as the IPv6 interface.

Set the **Addressing mode** to **Manual** and enter the **IP/Network Mask** and **IPv6 Address** for the interface.

Select the desired **Administrative Access** options.

Enabling router advertisements and configuring the IPv6 prefix list



This step must be performed in the CLI console.

In order for the IPv6 interface to autoconfigure IPv6 addresses, the interface must have router advertisements and specific IPv6 prefixes enabled.

Navigate to **System > Dashboard > Status** and scroll down to the **CLI Console**.

Enter the console and input the commands shown on the right.

Name	port16(00:09:0F:4E:0E:CE)
Alias	<input type="text"/>
Link Status	Up
Type	Physical Interface
Addressing mode <input checked="" type="radio"/> Manual <input type="radio"/> DHCP <input type="radio"/> PPPoE <input type="radio"/> Dedicate to FortiAP/FortiSwitch	
IP/Network Mask	<input type="text" value="10.10.116.1/255.255.255.0"/>
IPv6 Address	<input type="text" value="2001:db8::1/32"/>
Administrative Access	<input checked="" type="checkbox"/> HTTPS <input checked="" type="checkbox"/> PING <input checked="" type="checkbox"/> HTTP <input type="checkbox"/> FMG-Access <input type="checkbox"/> CAPWAP <input checked="" type="checkbox"/> SSH <input type="checkbox"/> SNMP <input type="checkbox"/> TELNET <input type="checkbox"/> FCT-Access
IPv6 Administrative Access	<input checked="" type="checkbox"/> HTTPS <input checked="" type="checkbox"/> PING <input checked="" type="checkbox"/> HTTP <input type="checkbox"/> FMG-Access <input type="checkbox"/> CAPWAP <input checked="" type="checkbox"/> SSH <input checked="" type="checkbox"/> SNMP <input type="checkbox"/> TELNET

```
config system interface
edit port16
config ipv6
set ip6-address 2001:db8::1/32
set ip6-send-adv enable
config ip6-prefix-list
edit 2001:db8::/32
    set autonomous-flag enable
    set onlink-flag enable
next
end
end
end
```

Configuring the IPv6 firewall address

Navigate to **Firewall Objects > Address > Addresses** and select **Create New > IPv6 Address**.

Under **Category**, ensure that **IPv6 Address** is selected.

Enter a **Name** for the firewall object and set the **IPv6 Address** to the address of the IPv6 interface.

'Bouncing' the IPv6 interface

You can now 'bounce' the IPv6 interface (bring the interface down and then back up). This causes a router advertisement using Neighbor Discovery Protocol, which performs address autoconfiguration and determines the reachability of neighboring nodes.

Navigate to **System > Network > Interfaces** and select the IPv6 interface you created earlier.

Set the **Administrative Access** to **Down**.

Return to the IPv6 interface and set the **Administrative Access** back to **Up**.

The screenshot shows the 'Create New' dialog for a firewall object. The left sidebar has a tree view with 'System', 'Router', 'Policy', and 'Firewall Objects'. Under 'Firewall Objects', 'Address' is expanded, showing 'Addresses' (selected), 'Groups', and 'Service'. The main panel shows a list of address objects: 'LAN-Subnet', 'Local LAN', 'Port1-Subnet', 'SSL-VPN-test', 'SSLVPN_TUNNEL_ADDR1', and 'all'. A dropdown menu is open, showing 'Address', 'IPv6 Address' (selected), 'Multicast Address', and 'Address Group'. Below the list, the 'Category' section has three radio buttons: 'Address', 'IPv6 Address' (selected), and 'Multicast Address'. The 'Name' field contains 'Port16'. The 'IPv6 Address' field contains '2001:db8::1/32'. The 'Show in Address List' checkbox is checked. The 'Comments' field is empty, with a character count of '0/255'. At the bottom are 'OK' and 'Cancel' buttons.

System
Router
Policy
Firewall Objects

Address
Addresses
Groups
Service

LAN-Subnet
Local LAN
Port1-Subnet
SSL-VPN-test
SSLVPN_TUNNEL_ADDR1
all

Create New Edit Address

Address
IPv6 Address
Multicast Address
Address Group

Category
☐ Address ☒ IPv6 Address ☐ Multicast Address

Name
Port16

IPv6 Address
2001:db8::1/32

Show in Address List
☒

Comments
Write a comment... 0/255

OK Cancel

Administrative Status ☐ Up ☒ Down

Administrative Status ☒ Up ☐ Down



Alternatively, you can reboot the FortiGate device, or wait for the next router advertisement.

Results

If you haven't done so already, connect a computer to the IPv6 interface you created.

On that computer, use the Command Prompt or Terminal, whichever is available, to view the IP configuration.

Windows: Enter `ipconfig` into the Command Prompt.

Mac: Enter `ifconfig` into Terminal.

You should see that an IPv6 address has been assigned using the prefix advertised on the connected IPv6 interface.

```
Ethernet adapter Local Area Connection :  
Connection-specific DNS Suffix . :  
IPv6 Address. . . . . : 2001:db8::44d2:ed61:9733:9253
```